

A CONTRIBUTION TO THE ANATOMY OF CONGENITAL EQUINO-VARUS.

By HERBERT L. BURRELL, M.D.,

OF BOSTON.

THE specimens which are illustrated in this article were obtained from a child born at seven months, and which lived for three or four hours. They were given me by Dr. W. N. Bullard. The right foot was normal. The left foot was in a position of moderate talipes equino-varus. The anterior part of the left foot could be corrected manually; but the sole of the heel tended always to face inward. The axis of the foot was curved, with the concavity inward. The plantar fascia was but slightly contracted.

Any attempt at correction of the deformity put the tendo Achillis, and the group of tendons lying behind the internal malleolus, viz., the flexor longus digitorum, flexor longus hallucis, and tibialis posticus, on the stretch. The skin over the tendons, as they crossed the inner border of the foot, was tense when the foot was in a corrected position.

Dissection.—The skin over the inner border of the foot, where the internal group of muscles turn to reach the sole of the foot, was more adherent to the underlying tissues than in the normal foot. There was no difference in the size of the bellies of the muscles; the sheaths of the tendons were apparently normal; the plantar fascia was not markedly contracted, but became tense when the foot was brought into a corrected position.

Astragalus.—The astragalus of the deformed foot was small; its neck was short; the axis curved with the concavity inward; the articulation surface was anteriorly smaller than that of the normal astragalus. In the normal foot the articulating surface of the astragalus with the tibia was divided into three facets by two ridges; in the deformed foot, where the astragalus articulated

with the tibia, there were but two facets, with a single ridge separating, one for the lower end of the tibia, and one for the external malleolus; instead of the facet for articulation with the fibula being covered with glistening cartilage it was covered by connective tissue. The outer part of the articulation surface of the deformed astragalus, as it articulated with the scaphoid, was distinctly diminished in size. The inter-articular ligament between the astragalus and os calcis was rudimentary.

It is interesting to note that the plane of the superior articulating surface of the os calcis was oblique, and faced inward and upward in the deformed foot, and that the depth of the os calcis was considerably greater on the outer than on the inner side. The os calcis of the deformed foot was small.

The dissection of these feet has been a matter of great painstaking by Mr. H. G. Gross, formerly house surgeon at the Children's Hospital. So far as I know, these specimens are unique, and very great care has been taken to describe them accurately, as it must be self-evident that their careful observation may be a contribution to the knowledge of clubfoot.



FIG. 1.—Appearance presented after total excision of jaw and removal of secondary growth.



FIG. 2.—Secondary tumor removed, as shown in Fig. 1.